IN THE CLAIMS

1. (withdrawn) A method for generating thrust from a gas turbine engine using a pulse detonation system, said method comprising:

introducing fuel and air to the engine;

mixing fuel and air in a pulse detonation system deflagration chamber positioned radially outward from an engine exhaust centerbody; and

detonating the fuel and air mixture within the pulse detonation system to facilitate increasing the temperature and pressure within the engine and to generate engine thrust.

2. (withdrawn) A method in accordance with Claim 1 wherein the engine includes a core engine, mixing fuel and air in a pulse detonation system deflagration chamber further comprises:

supplying fuel and air to the deflagration chamber downstream from the core engine such that the chamber is operated in a fuel-rich mode; and

accelerating the fuel-air mixture from the deflagration chamber to a detonation chamber downstream from the deflagration chamber.

3. (withdrawn) A method in accordance with Claim 2 wherein accelerating the fuel-air mixture further comprises translating a reverse flap that is downstream from the detonation chamber from a first position during a first mode of engine operation to a second position during a second mode of engine operation.

4. (withdrawn) A method in accordance with Claim 1 wherein the engine includes a core engine, mixing fuel and air in a pulse detonation system deflagration chamber further comprises mixing fuel and air in a pulse detonation system deflagration chamber that extends circumferentially around the exhaust centerbody.

5. (withdrawn) A method in accordance with Claim 1 further comprising:

positioning the centerbody in a first position during a first mode of engine operation; and

translating the centerbody axially upstream to a second position during a second mode of engine operation.

6. (previously amended) A pulse detonation system for a gas turbine engine, said pulse detonation system configured to create a temperature rise and a pressure rise within the gas turbine engine and to increase gas turbine engine thrust, said pulse detonation system comprising:

at least one deflagration chamber radially outward from an engine exhaust centerbody; and

a detonation chamber in flow communication with said deflagration chamber, said detonation chamber configured to detonate a fuel mixture.

7. (original) A pulse detonation system in accordance with Claim 6 wherein said pulse detonation system is downstream from a core engine powering the gas turbine engine.

8. (canceled)

9. (previously amended) A pulse detonation system in accordance with Claim 6 wherein said detonation chamber downstream from said deflagration chamber.

10. (previously amended) A pulse detonation system in accordance with Claim 6 further comprising a reversed flap configured to translate axially from a first position during a first engine operating mode to a second position during a second engine operating mode.

11. (canceled)

12. (original) A pulse detonation system in accordance with Claim 6 wherein said deflagration chamber is annular and extends circumferentially around the engine exhaust centerbody.

13. (original) A pulse detonation system in accordance with Claim 6 wherein said at least one deflagration chamber comprises a plurality of deflagration chambers spaced circumferentially around the engine exhaust centerbody.

14. (previously amended) A gas turbine engine comprising:

an inlet portion;

an exhaust portion positioned co-axially with said inlet portion;

a centerline axis of symmetry;

an exhaust centerbody concentrically aligned with said exhaust portion and extending axially along said centerline axis of symmetry into said exhaust portion; and

a pulse detonation system positioned between said inlet portion and said exhaust portion, said pulse detonation system configured to create a temperature rise and a pressure rise within said engine and to increase engine thrust, said pulse detonation system comprising:

at least one deflagration chamber radially outward from said engine exhaust centerbody; and

a detonation chamber downstream from and in flow communication with said at least on deflagration chamber, said detonation chamber configured to detonate a fuel-air mixture.

15. (original) A gas turbine engine in accordance with Claim 14 further comprising a core engine configured to power said engine, said centerbody extending downstream from said core engine, said pulse detonation downstream from and in flow communication with said core engine.

16. (original) A gas turbine engine in accordance with Claim 15 wherein said at least one pulse detonation system deflagration chamber is annular and extends circumferentially around said engine centerbody.

17. (original) A gas turbine engine in accordance with Claim 15 wherein said at least one pulse detonation system deflagration chamber comprises a plurality of deflagration chambers spaced circumferentially around said engine centerbody.

18. (original) A gas turbine engine in accordance with Claim 15 wherein said centerbody configured to translate axially from a first position during a first mode of engine operation, and a second position during a second mode of operation.

19. (canceled)

20. (previously amended) A gas turbine engine in accordance with Claim 15 wherein said pulse detonation system further comprises a reversed flap configured to translate axially from a first position during a first engine operating mode to a second position during a second engine operating mode.